



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/751,464	01/06/2004	Jung-hoe Kim	030681-617	2368

21839 7590 03/23/2005

BURNS DOANE SWECKER & MATHIS L L P
POST OFFICE BOX 1404
ALEXANDRIA, VA 22313-1404

EXAMINER

NGUYEN, LINH V

ART UNIT PAPER NUMBER

2819

DATE MAILED: 03/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary	Application No.	Applicant(s)	
	10/751,464	KIM ET AL.	
	Examiner	Art Unit	
	Linh V. Nguyen	2819	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-18 is/are allowed.
- 6) ☐ Claim(s) 1,2,4,7-9 and 12-14 is/are rejected.
- 7) ☒ Claim(s) 3-6,10 and 11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8/5/04 ; 4/26/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to application 10/751,464 filed on 01/06/2004.

Claims 1 – 18 are pending on this application.

Specification

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 2, 7, 8, 9, and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by De Queiroz Pub.No.: US 2004/0015697.

Fig. 1 of Queiroz discloses a method of encoding digital data, the method comprising: mapping a plurality of samples constituting the digital data onto bit planes (Fig. 3); and selectively encoding all of bit-sliced data of the bit planes from bit-sliced data composed of most significant bits (Fig. 3 [MSB]) mapped onto the bit planes to bit-

sliced data composed of least significant bits (Fig. 3 [LSB]) in consideration of an encoding efficiency or according to a transformed bit-sliced encoding method (paragraph 0039).

Regarding claim 2, Queiroz further comprising packaging the encoded samples into a hierarchical structure (Page 4, lines 34 – 39 of paragraph 0038).

Regarding claim 7, wherein side information (Fig. 3) corresponding to a plurality of layers (Fig. 3) and a plurality of encoded quantization samples are packaged into a hierarchical structure (Page 4, lines 34 – 39 of paragraph 0038).

Regarding claim 8, Fig. 1 of Queiroz discloses a apparatus for encoding digital data, the apparatus comprising: a bit slicing unit (110) that bit-slices a plurality of samples constituting the digital data to obtain bit-sliced data (Fig. 3); and an encoding unit (130) that selectively encodes all of bit-sliced data of bit planes from bit-sliced data composed of most significant bits (Fig. 3 [MSB]) of the bit planes to bit-sliced data composed of least significant bits (Fig 3 [LSB]) in consideration of an encoding efficiency or according to a transformed bit-sliced encoding method (paragraph 0039).

Regarding claim 9, Queiroz further comprising a bit packing unit that packages the samples encoded by the encoding unit into a hierarchical structure (Page 4, lines 34 – 39 of paragraph 0038).

Regarding claim 13, wherein the encoding unit arithmetic-codes the bit-sliced data (This is inherent to encoding unit 130, because every encoder must have some type of arithmetic function to encoding data).

Regarding claim 14, wherein the bit packing unit packages side information and a plurality of lossless-encoded quantization samples corresponding to a plurality of layers into a hierarchical structure (Page 4, lines 34 – 39 of paragraph 0038).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable Queiroz as applied to claim 8 above, in view of Bruekers U.S. Patent No. 6,778,965.

Fig. 1 [130] of Queiroz as applied to claim 8 above, fails to disclose the encoder is select from Huffman or arithmetic codes.

Fig. 8 of Bruekers discloses an encoder system and the encoder is selected from Huffman or arithmetic codes (Col. 7 lines 58 – 60).

Queiroz and Bruekers are common subject matter for data encoding. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporated the Huffman or arithmetic coding of Bruekers's encoder into the encoder of Queiroz for the purpose of providing lossless coding and a significant data reduction can be obtain (Bruekers, Col. 2 lines 59 – 62).

Allowable Subject Matter

11. Claims 3 – 6, 10 and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 15 – 18 are allowed.

Cited References

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited of reference is relating to reference buffer.

Contact Information

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Linh Van Nguyen whose telephone number is (571) 272-1810. The examiner can normally be reached from 8:30 – 5:00 Monday-Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Michael Tokar can be reached at (571) 272-1812. The fax phone numbers for the organization where this application or proceeding is assigned are (703-872-9306) for regular communications and (703-872-9306) for After Final communications.

3/14/05

Linh Van Nguyen



Art Unit 2819